

Please amend specification paragraph [00101]<sup>100</sup> as follows:

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--[00101]<sup>100</sup> Figure 31 shows an optical system according to the present invention for extended depth of field passive ranging. Passive ranging using an optical mask is described in U.S. Patent No. 5,521,596, 5,521,695 entitled "Range Estimation Apparatus and Method" by the present inventors, herein incorporated by reference. U.S. Patent No. 5,521,596, 5,521,695 discusses systems containing range dependent null space, which is substantially similar to the range dependent zeroes discussed below. --

Please amend specification paragraph [00102] as follows:

--[00102] Briefly, passive ranging is accomplished by modifying the incoherent optical system of Figure 2 in such a way that range dependent zeroes are present in the Optical Transfer Function (OTF). Note that the OTF of the EDF system discussed above could not contain zeroes, because the zeroes cannot be removed by post filtering to restore the image. In Figure 31, however, zeroes are added to encode the wavefront with range information. To find the range associated with small specific blocks of the image, the period of zeroes within a block is related to the range to the object imaged within the block. U.S. Patent No. 5,521,596, 5,521,695 primarily discusses amplitude masks, but phase masks can also produce an OTF with zeroes as a function of object range, and without loss of optical energy. Current passive ranging systems can only operate over a very limited object depth, beyond which it becomes impossible to locate the zeroes, because the OTF main lobe is narrowed, and the ranging zeroes get lost in the OTF lobe zeroes. Extending the depth of field of a passive ranging system makes such a system much more useful.--

Please amend specification paragraph [00107] as follows:

--[00107] Figure 35 shows the PSF of the EDF/PR system with  $y\Psi = 10$ . The fact that  $\Psi$  is positive indicates that the object is on the far side of the in-focus plane from the lens. The two peaks of the PSF have moved closer together. Thus, it can be seen that the misfocus (or distance from in-focus plane) is related to the distance between the peaks of the PSF. The actual processing done by digital range estimator 75 is, of course, considerably more complicated, since an entire scene is